

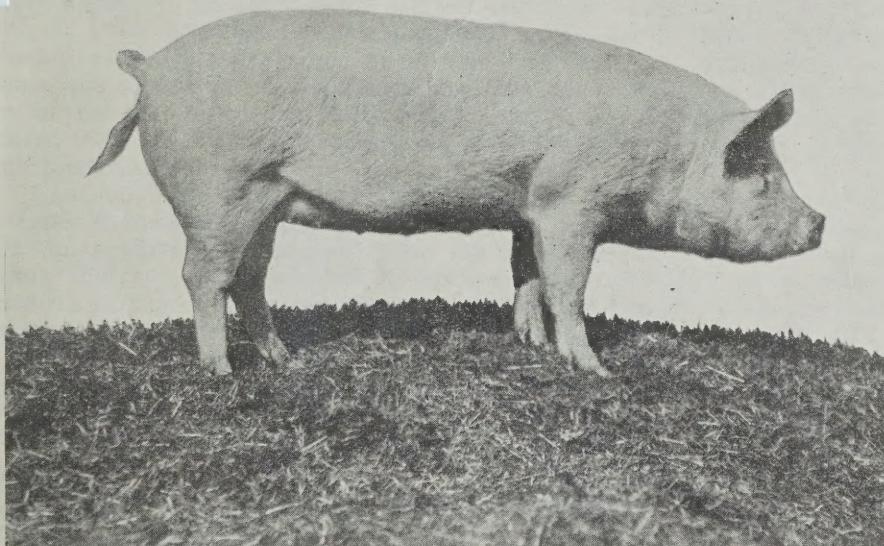
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HANDBOOK ON THE BACON HOG AND HOG GRADING

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A SELECT BACON HOG—Let us make it a National Type

DOMINION OF CANADA
DEPARTMENT OF AGRICULTURE

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LIVE STOCK BRANCH
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THE BACON HOG AND HOG GRADING

THE WHY OF "BACON HOGS" IN CANADA

The bacon hog is the result of a concerted effort on the part of breeders to produce a finished animal the carcass of which will meet the requirements of the consuming public. The housewife, first in Britain and latterly in this country, has been demanding leaner quality bacon; so that to-day, bacon must be lean and of good quality. Fat, heavy, or coarse bacon is not popular.

In order to meet the demands of the fastidious housewife, both at home and in foreign markets, packers and others engaged in the killing of hogs and the distribution of their products, found that the hog with light shoulders, long sides, meaty backs, full loins and rump, and well-developed hams, carrying a uniform medium finish provided the cuts demanded in the retail trade. Progressive breeders naturally endeavoured to produce hogs that fully met trade requirements, and to-day the efforts of such men have met with a high degree of success in that the present-day bacon hog of approved type leaves little to be desired from the standpoint of market requirements and is also a profitable pork-producing machine.

Canadian hogs must be of a type which will enable the product of their carcasses to meet successfully competition in the world's markets. Fortunately, this type produces an ideal product for the retail trade in Canadian towns and cities. Wiltshire sides produced from bacon hogs provide a means whereby Canada's surplus of bacon can be marketed abroad at highest values, thus maintaining a steady demand and a good market for hogs throughout the Dominion.

We have an additional advantage in the production of this type of hog in that, firstly, the by-products of our great milling and dairy industries contain the necessary elements of a good growing ration for pigs; and, secondly, the large acreage sown annually to small grains provides ample feed for finishing purposes.

WHAT IS A "BACON HOG"?

This type of hog must have length of side, as the middle is the most valuable part of the carcass. The standard length of the ideal Wiltshire is 30 inches from round bone to front edge of first rib. The hog should be of uniform depth with trim, straight underline. The head should be of medium length with a slightly dished face, broad forehead, and rather small firmly-attached erect ears, fringed with fine hair. The neck is well muscled with no tendency to arch on top. The jowl should be trim but not heavy and flabby or coarse. Smooth, compact shoulders are essential and this requirement is easily understood when the relative price of shoulder meat is compared with other cuts of the carcass. The back should be slightly arched from neck to tail with a well-sprung rib dropping straight, giving a smooth even side blending with shoulder and hind-quarters. Finish, which is so important, is clearly indicated in the top line. Well-finished hogs are of medium width throughout, indicating a full deep loin and a long well-developed rump. Ideal finish gives a carcass that cuts out with $1\frac{1}{4}$ inches to $1\frac{1}{2}$ inches of fat evenly distributed along the back. The ham is described as smooth and tapering, having no excess bulges of fat, as such necessitate more trimming. The bacon type hog is slightly long of leg and strong of

bone but the bone is clean and flinty without puffiness, and the pig stands straight and strong at the pasterns. Quality of bone is very significant in the live hog as it is invariably correlated with constitution and feeding capacity. In short, the bacon hog is a stretchy, smooth quality animal possessing thrift and excellent feeding qualities, and, when finished to an average weight of 200 pounds, exhibits an ideal carcass when slaughtered.

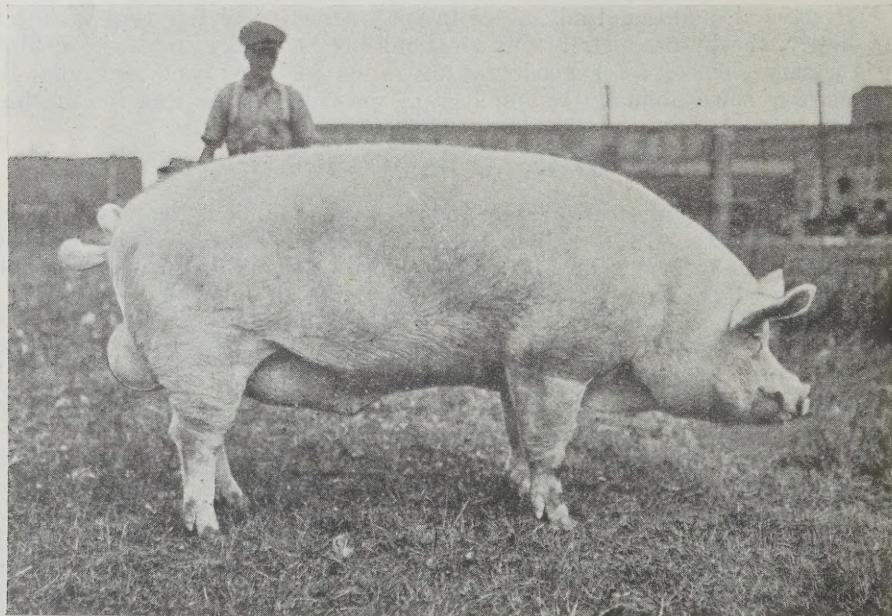
Brood sows of bacon type are usually prolific and good mothers, rearing large litters. Uniform litters of eight to ten pigs each are important, as they reduce the cost of the pig at weaning and enable farmers to finish and market the entire litter in one shipment. Brood sows for the breeding herd should have fourteen evenly placed teats and be from breeding stock that has proved to be profitable in production.

BREEDS OF BACON HOGS

The three recognized bacon breeds, namely, Yorkshire, Tamworth, and Canadian-type Berkshire, all conform reasonably well to the required standards demanded by the British Wiltshire trade. However, all three bacon breeds have defects, common to each, of which all hog raisers should be aware, especially now that a superior quality product is in demand.

YORKSHIRE.

The Yorkshire is a particularly popular bacon breed both from the standpoint of the farmer and the packer. Typical Yorkshire hogs, when properly fed and finished for market, produce a carcass which carries the desired balance and proportion in relation to length, an even distribution of fat, and a wealth of lean meat. Good quality of bone, which is associated with quality in the skin and hair, leaves the carcass with a rind that presents a clean, attractive appearance on the rail.

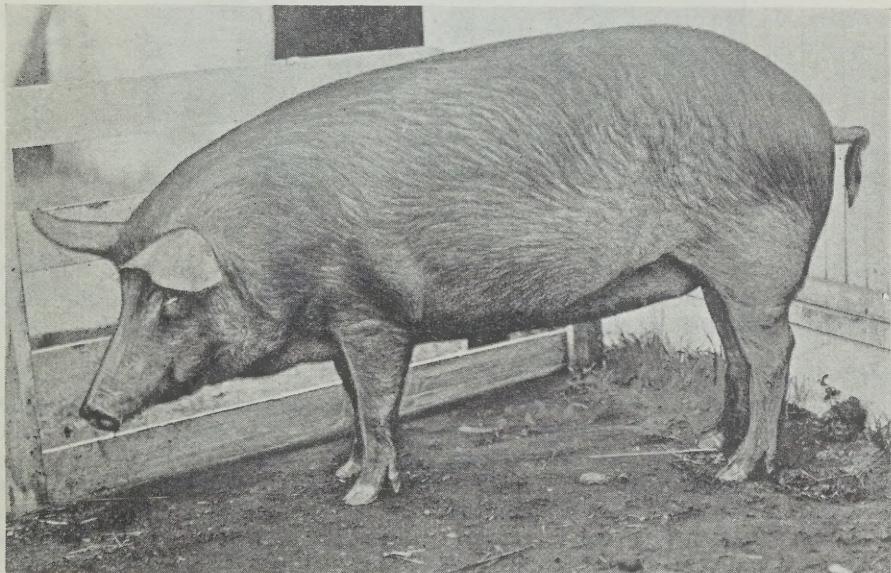


Good Type Yorkshire Boar

Although a higher percentage of individuals of the Yorkshire breed has perhaps attained more closely to the desired standards of perfection, there is still too great a percentage of market hogs of Yorkshire breeding which falls short of the requirements. Some strains lack the desired length of body. Others lack constitution and thrift. The Yorkshire breed offers a reasonably large number of strains to choose from, so that discretion can be exercised in the choice of animals that have the desired length, a vigorous constitution and a smoothness of conformation essential for the making of economical gains that result in a carcass saleable at the top price for Wiltshire sides or best Canadian cuts.

TAMWORTH.

Tamworth hogs have always maintained a high reputation for the production of high-class Wiltshire sides. Unfortunately, in Canada they have never been produced extensively, and, while there are many individuals of excellent type and quality, there are comparatively few strains from which to select. Tamworths as a breed are inclined to be slightly heavy in the shoulder. Some strains are inclined to be short of side, and market hogs from such breeding invariably



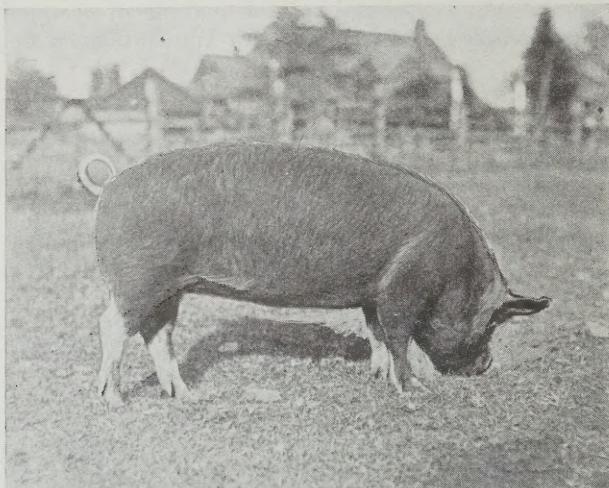
Tamworth Sow. The type that will produce select bacon hogs.

carry too heavy a fat covering if fed to weights of 200 to 220 pounds. Tamworths are prolific, are economical feeders, have good quality of bone and skin, and are considered less subject to sunscald than white hogs. An infusion of new blood on the part of pure-bred breeders would appear advisable and should be followed up with the objective of developing strains with smoother and lighter shoulders, slightly more length of side, and better balance of body throughout.

CANADIAN TYPE BERKSHIRE.

Possibly fewer hogs of Berkshire breeding conform to bacon standards than of the other two recognized bacon breeds. This is due to the fact that only a few breeders have confined themselves definitely to the development of a bacon type hog. There is still a percentage of individuals from even the best strains that revert back to the short, thick type. However, with persistent selection along proper lines this difficulty will undoubtedly be overcome.

Berkshire carcasses from improved strains carry a large proportion of lean meat to fat and the yield of dressed meat is high. Owing to the black hair there is an objection on the part of packers to the Berkshire carcass, as it does not present the clean, attractive appearance necessary for first-quality products. Berkshire hogs will not stand close pen feeding and forcing with a heavy car-



Canadian Type Berkshire Gilt

bonaceous grain ration. Under such feeding practice, individuals of this breed do not develop sufficient length and the hog at market weight kills out with a carcass possessing an excessive fat covering.

HAMPSHIRE AND LARGE BLACK.

The exponents of these two breeds claim that they possess bacon qualifications. It is true that certain strains possessing length will, in the hands of skilful feeders who have fed a ration containing plenty of protein, produce some select bacon hogs. This will apply, however, to almost any breed when special individuals are selected. There are undoubtedly individuals within the Hampshire and Large Black breeds which conform somewhat closely to bacon standards. However, commercial hogs from these breeds prove that at the present time at least, very few individuals are of a sufficiently high standard to grade as select bacon hogs. Neither of these breeds are common in Canada; they have nothing special to offer and consequently the hog raiser is well advised to devote his attention to the well-established and recognized bacon breeds.

CROSS-BREEDING.

Cross-breeding, as resorted to in the breeding of bacon hogs throughout Canada, has, generally speaking, not been followed with the best results. Cross-breeding is largely responsible for the high percentage of nondescript hogs being bred and marketed at the present time. The Danes practise cross-breeding in hogs with perhaps the most satisfactory results of any country, from the standpoints of both the farmer and the packer. They have, however, long since realized the limitations of the practice and have developed a policy which permits them to reap the benefits. In Denmark there are two recognized breeds of hogs, namely, the Landrace and the Yorkshire. The Landrace breed possesses special characteristics which make it particularly valuable from the standpoint of the

production of brood sows; consequently the brood sows for general farmers' use are bred from the Landrace breed. Such sows are prolific, and are good mothers, possessing bacon characteristics. When they are bred to Yorkshire boars, the result is litters which develop into thrifty excellent-type bacon hogs. The Yorkshire in Denmark is bred for the production of high-quality breeding boars which are distributed to individual farmers and farmers' associations for use as stock sires. By developing two special breeds, one for the production of brood sows and the other for the production of boars, the Danes have been able to practice cross-breeding successfully and are securing thriftiness in their hogs as well as a hog which finishes to meet the main requirements of the bacon market.

In Canada, cross-breeding has been mostly a hit-and-miss practice. In many cases the progeny of cross-bred litters has been retained for breeding purposes and recrossed indiscriminately for periods covering several generations. Where such has been the case, the degenerated breeding stock produces progeny which is lacking in thrift as compared with well-bred hogs, and, moreover, such hogs, when finished for market, produce a carcass of inferior quality.

Experienced breeders who realize fully the limitations of the practice may cross-breed with profit, provided they secure outstanding individuals for foundation stock of the breeds they propose to cross and provided that the progeny from cross-breeding is considered purely commercial hogs and is never under any circumstances retained for breeding purposes. Very little information is as yet available on the suitability of cross-bred hogs for the production of Wiltshire sides. The Yorkshire and Tamworth breeds cross well from the standpoint of improved feeding qualities and should give good results in the production of suitable bacon hogs. The Yorkshire-Berkshire and Tamworth-Berkshire crosses are also popular, with a slight preference in favour of the first-mentioned cross.

WHY THE HOG GRADES AND REGULATIONS WERE REVISED

The improvement in Canadian hogs, resulting from the grading policy and market conditions in 1927, was such that the 1927 Hog Conference agreed to do away with the 10 per cent premium and substitute for it a spread of 50 cents per cwt. between the first two grades. This conference also recognized the growing need for a revision of the grades and charged the department with the responsibility of seeing that producers were paid for their hogs according to grade.

The Joint Swine Committee, following the 1927 conference, undertook to prepare a revised draft of the grades. When same had been submitted to the producer and packer interests and had received their general approval, the department accepted the recommendation and steps were taken at once to revise the regulations, so as to include the suggested revision of grades.

Experience in the enforcement of the Hog Grading Regulations suggested the need for strengthening the wording of the regulations, particularly regulation 11, in order that the legal meaning and responsibility be made clear.

OFFICIAL HOG GRADES

The nine official hog grades included in the regulations seek to separate the different types, weights and qualities of hogs produced in the Dominion in accordance with their average market worth. This worth is determined in the main by consumer demand and the selling values of the commercial cuts produced from the carcasses of different grades of hogs.

GRADE 1—SELECT BACON

Conformation, weight and finish are the determining factors which set the standard for this grade. The weight limits are 180 to 220 pounds W.O.C. at stockyards and abattoirs or 190 to 230 pounds fed and watered at stockyards or at local shipping points. The ideal is the bacon hog that is finished at 200 pounds, live weight. Breeding is the first essential in producing bacon hogs, although feeding is equally as important. Well-bred, properly finished bacon hog carcasses should carry a uniform layer of fat along the back, which should not measure less than 1 inch in thickness at the thinnest point in the back and not more than two inches in thickness over the shoulder.



A Carlot of Select Bacon Hogs. The result of proper breeding and finishing.

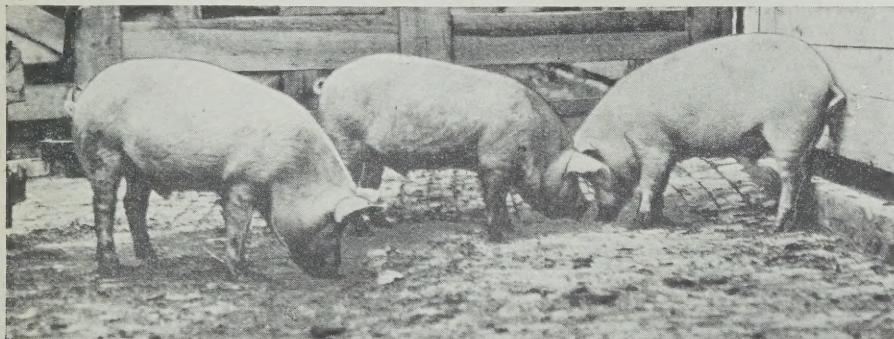
Carcasses from under-finished bacon hogs are very undesirable. Length and type will not offset the poor yield, thin streaks and the general low quality of all cuts from an unfinished bacon hog. Excessive feeding with grains such as corn or barley, during the first three months of the pig's life, tends to shorten the carcass and develop too heavy a fat covering. Dairy by-products, green feed, and shorts or middlings develop length, bone and muscle, permitting of finishing at proper weights on the more fattening grain feeds.

Farmers, who aim to market a high percentage of hogs of the Select Bacon grade, should first make sure that their breeding stock is of the right type and conformation; they should then feed in accordance with recognized and approved methods and aim to have their pigs ready for market as close to 200 pounds as possible.

GRADE 2—BACON

The minimum and maximum weight limits are 10 pounds lighter for this grade than for Select Bacons. The hogs, however, must be of the same general characteristics as Select Bacon hogs, but may lack somewhat in length and/or in general quality as compared with the Selects. This grade is designed to take care of the bacon type hogs which are not quite up to Select hog standards.

The widespread distribution of bacon type breeding stock, combined with more attention to feeding, has effected a remarkable improvement in the general average quality of a large percentage of our hog population, and this grade will provide some encouragement to the producer who has tried to and is continuing to improve his hogs, but has not yet achieved a Select Bacon standard.



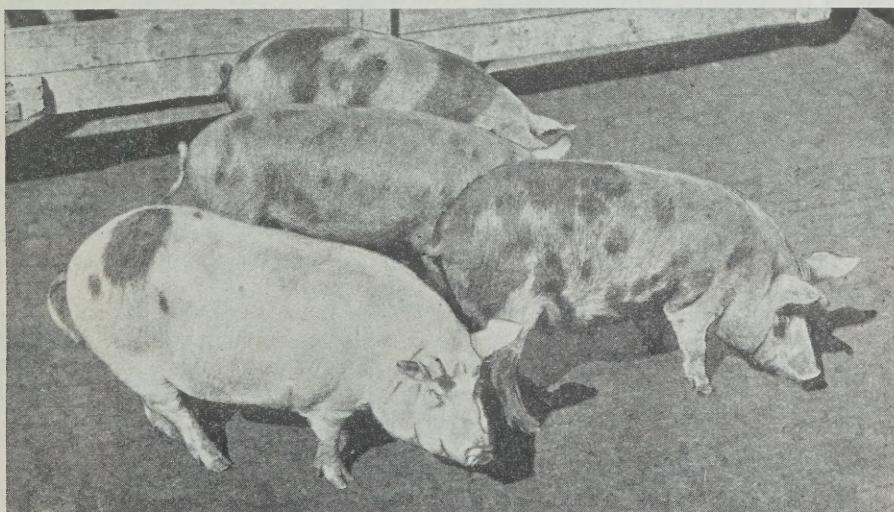
BACON HOGS

A little more length and general quality and they would make the top grade.

Carcasses from the Bacon grade will find a ready demand both on our domestic and export markets, and at the same time will leave the Select Bacon grade as the ultimate goal and the incentive for continued improvement in the quality of our hog production.

GRADE 3—BUTCHERS

The weight limits of this grade are from 150 to 230 pounds W.O.C. at stockyards and abattoirs, or 160 to 240 pounds fed and watered at stockyards or at local shipping points. This grade will take in all hogs of smooth fleshing and good finish not conforming to the standards for the Bacon grades.



Butcher Hogs. The wrong type with excessive finish.

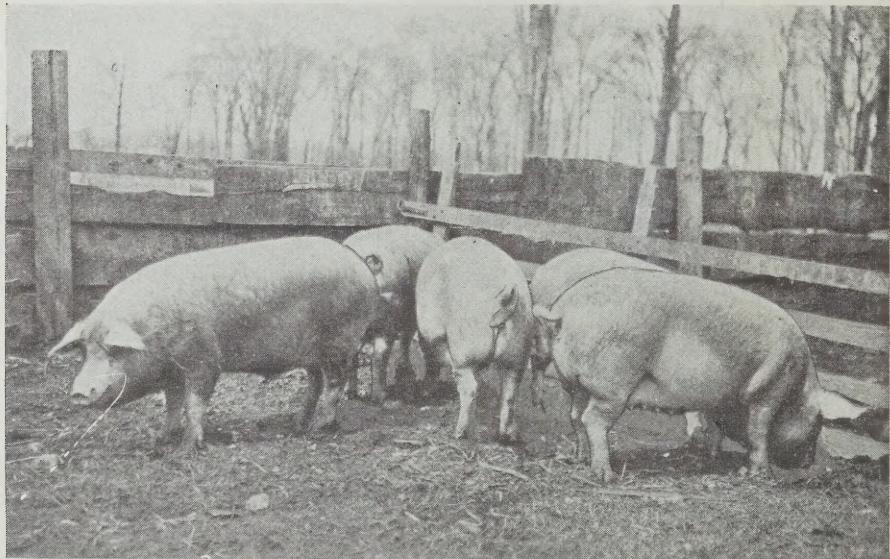
This grade will take in the lower end of the old Thick Smooth grade in the same way that the Bacon grade takes in the upper or improved end. In addi-

tion to this, the minimum weights have been lowered 10 pounds below those of the old Thick Smooth grade, so as to take in the upper end of the old Shop Hog grade, which was probably always equal in value to a considerable percentage of the hogs in the Thick Smooth grade. Now that the upper end of the Shop Hog grade has been taken care of, the grade will disappear and buyers who seek killing hogs under 150 pounds in weight will make their selections from the Light and Feeder grade.

The Butcher grade will take in hogs varying widely in finish and breeding. Carcasses from this grade of hogs will find their outlet on the domestic market in the form of fresh or cured product. The Canadian housewife is to-day demanding quality in fresh and cured pork cuts, so that there will be a tendency to discriminate against the extremes in this grade, which will make for a lower average price for the grade as a whole.

GRADES 4 AND 5—HEAVIES AND EXTRA HEAVIES.

When grading first went into effect, the number of hogs grading into these two grades amounted to 6.15 per cent of the total (1923). Farmers quickly learned that over-weight hogs were not popular at marketing points, with the result that marketings in these grades have steadily decreased to 4.30 per cent



Heavies. Too heavy for market requirements, less profitable for the farmer.

in 1928. Hogs going into either of these grades may be of the Bacon type or the Butcher type, but in either case the carcass is too heavy for the popular consumer demand. When closer attention is paid to finishing hogs at the 200-pound mark, very few will be marketed at over weights and the producer will save the heavy discounts which the market imposes on these grades.

GRADE 6—LIGHTS AND FEEDERS.

This grade includes all hogs of smooth conformation weighing under 150 pounds W.O.C. at stockyards or abattoirs, or 160 pounds fed and watered at stockyards or at local shipping points; also unfinished hogs of any weight.

As has already been stated, some buyers may select some of the better finished hogs in this grade to meet their killing requirements for light-weight

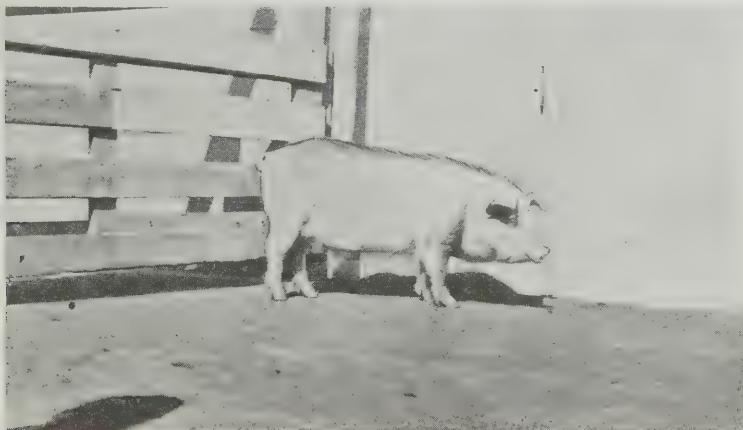


Feeder Hogs. A month's feeding would have made them selects.

hogs; however, in the main hogs in this grade will be worth more for the feed lot. Hog grading has centered popular demand on feeder pigs of bacon type, because these as a rule make the best gains and when finished sell for the highest price, due to the higher percentage of Selects. Although there is as a rule a good demand for bacon type feeders, it will generally pay the farmer to finish his hogs to bacon weights before marketing them.

GRADE 7—ROUGHHS.

This grade includes hogs that have defects in conformation, the unthrifty runts of litters, and hogs that have been grown slowly and have been marketed in an underfinished condition. Some farmers follow the practice of allowing their pigs to run on pasture during the summer, then turn them into the grain fields to pick what they can get in the fall and market them when partially finished



Roughs. A wasteful hog carrying poor quality meat.

about mid-winter or towards spring, at ages ranging from nine months to a year. Such hogs have developed too much frame, their bone having developed towards maturity. The carcass is wasteful; the fleshing is of poor quality; and when sold in an unfinished condition it cannot be included in any of the other grades.

The unthrifty runts of litters, or pigs possessing defects in conformation, cannot usually be finished for market at the proper age. Owing to their unthriftness or defects of conformation, their carcasses are of poor quality and are wasteful. The percentage of rough hogs will never be large but this grade takes care of undesirables which have some market value although of very poor quality.

GRADE 8—Sows Nos. 1 AND 2.

Sows easily divide themselves into two grades. Those that have had only one litter, that are well finished, with trim underlines, and have not fully reached maturity, are graded as No. 1. Carcasses from such sows can be cut up without an undue amount of trim and the cuts, although overweight, can be utilized, in part at least, for a medium class trade.

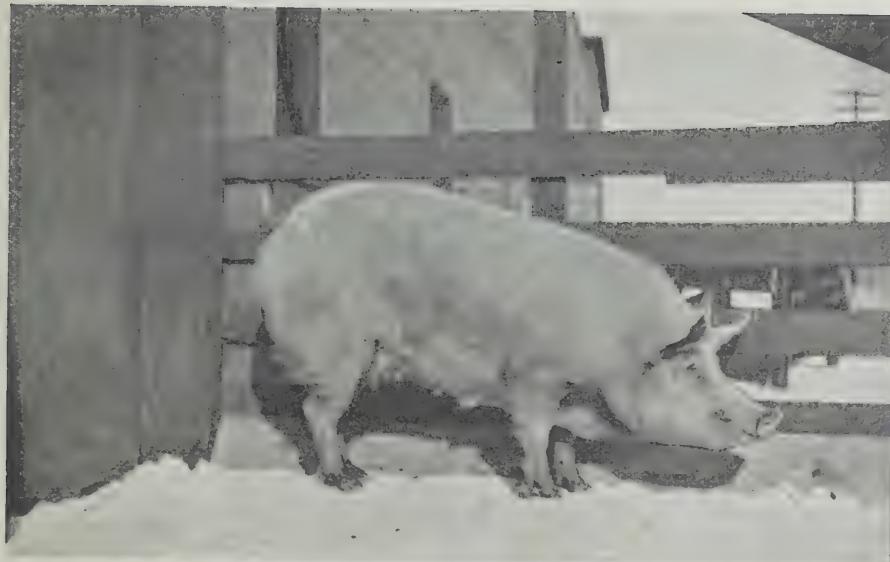


Sow No. 1

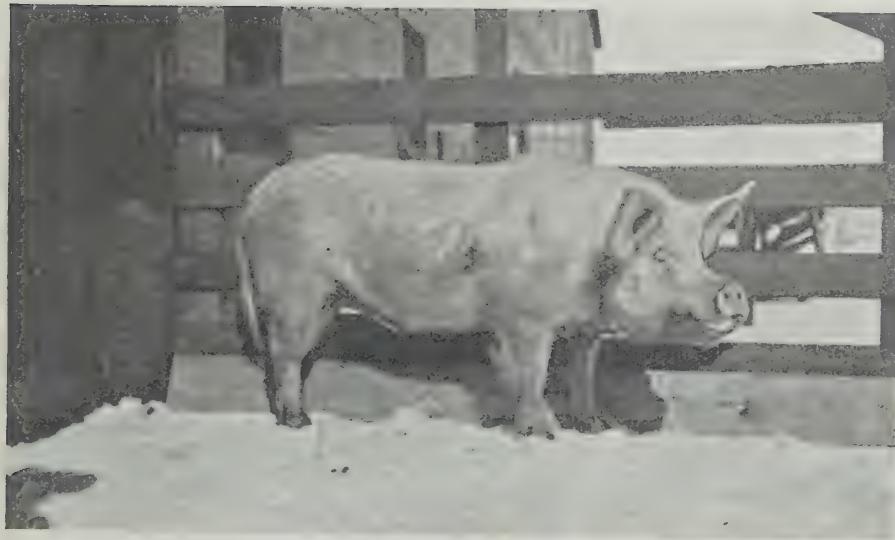
Sows that have had more than one litter, that have pendulous underlines, and that have become fully mature grade No. 2. Carcasses from No. 2 sows require heavy trimming at the flanks, the meat and bone are coarser, and the carcasses so heavy that the product is only suitable for mess pork.

GRADE 9—STAGS.

Castrated boars, even when well healed, produce meat that lacks in flavour. The carcass possesses masculine characteristics which are wasteful, and consequently all stags are graded separately and sold as such.



Sow No. 2



Stag.

WHY HOG GRADING IS NECESSARY

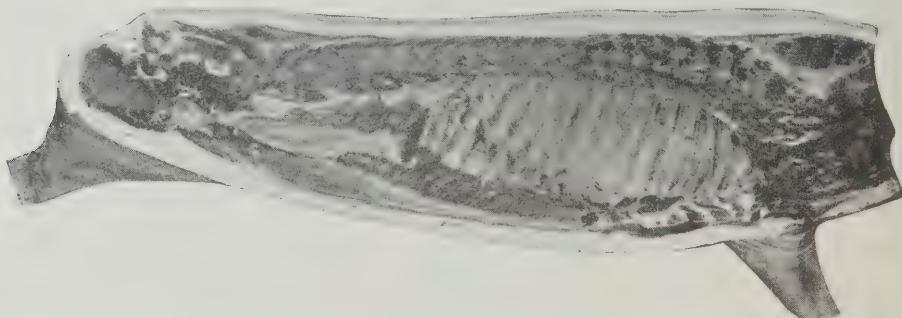
The price of bacon in Britain depends on the quality of the product and the total supply offered for sale by the different countries. During 1921 the monthly average price of Danish bacon ranged from 8 to 51 shillings per cwt. higher than the monthly average price of Canadian. One of the chief factors responsible for this great price discrepancy was the lack of uniformity in our hog production and it was the recognition of this problem which resulted in the calling of the National Swine Conference by the Dominion Department of Agriculture in the fall of that year. At this conference it was clearly demonstrated that the quality of Canadian hogs must be steadily improved if Canada were to maintain an outlet for her product on the world's bacon markets. It was also agreed that the best way to accomplish this objective was to institute some system of hog grading, which would result in the farmer being paid for his hogs in accordance with their quality.

The wisdom of this step has never been questioned, and the general improvement in the quality of Canadian hogs is now recognized and admitted by all who are familiar with the industry. This improvement made possible a greater uniformity and a higher standard of quality in the Wiltshire Sides exported to Britain, with the result that Canadian and Danish bacon prices were placed on a more even basis. Unfortunately our export trade has diminished in volume; however, this has not been attributable to a lack of quality in the Canadian product, but rather to our inability to do a profitable export business on account of the unusually heavy supplies of product from continental Europe.

As this situation rights itself, we will undoubtedly again increase our shipments of bacon to Britain. In the meantime by featuring bacon type and quality production through hog grading the domestic market demand has been improved. The Canadian consumer is demanding best quality products. The highest quality cuts in pork products, either fresh or cured, are obtainable from properly finished bacon type hogs. The Hog Grading Policy, by emphasizing the production of this type, is therefore developing a broader domestic market outlet and is at the same time maintaining the swine industry in so far as production is concerned in a position to take the maximum advantage of any profitable export market outlet which may offer.

BENEFITS TO BE DERIVED FROM HOG GRADING

Hog grading data is a reliable agency for showing up many of the leaks which are prone to creep into the marketing end of our swine industry. For example, it has already been pointed out that the percentage of heavy hogs has decreased since the inception of hog grading. The percentage of Select Bacon hogs, which was below 12 per cent for the whole Dominion at the commence-



Leanest Wiltshire. Note length of side and uniformity of fat covering.

ment of hog grading, has risen gradually to 17 per cent. This improvement has been accomplished through closer attention to breeding and feeding; because of the data revealed to farmers through this policy and also because the policy provided for payment on a quality basis.



Lean Wiltshire. A well proportioned side, but slightly fat for the taste of many consumers.

Statistics alone do not reveal the benefits which have been derived through this policy. The general quality of all hogs has been improved because of the greater attention which has been paid to principles of breeding and feeding, and any retrogression in the quality of Canadian hogs now would have to be deliberately sought after, as the data compiled each year on the grading entirely eliminates any carelessness in production which might be attributed to ignorance.

ESSENTIALS FOR THE SUCCESS OF HOG GRADING

The Government assumes full responsibility for the maintenance of grades of proper and uniform standards and also for the enforcement of the regulations. The compulsory grading of all hogs sold or offered for sale at stockyards and abattoirs has tended to make purchase and sale on a graded basis the custom at these points. For a time the effect of this was to gradually popularize purchase and sale on a graded basis at country points.

Where opposition to grading was pronounced on the part of individuals, the situation has been a difficult one to meet, especially if a majority of the farmers in the district are producing a poor type of hog. Under such circumstances the grading and sale of hogs on a graded basis at their ultimate market destination was of very little use as the primary producer of the hogs was not paid in accordance with the quality of his production.

From the outset it was realized that one essential to general satisfaction in the full application of hog grading was the necessity for establishing machinery whereby the difference in price in favour of Select Bacon hogs would get back to the producer. As time went on the need for something of this kind became more and more apparent, so that finally in revising the regulations and the hog grades steps have been taken to include the necessary provisions in the regulations to ensure the farmer a graded return on his hogs.

INFORMATION CONCERNING THE OPERATION OF HOG GRADING

In assuming responsibility for the enforcement of the regulations and the maintenance of uniform grading standards, the Government has a trained staff of hog graders stationed at all stockyards and abattoirs. These graders in each province are under the direction of a District Swine Grader, who also has charge of the swine field work in the province. These district graders are in turn responsible to the Chief of the Swine Division, Dominion Live Stock Branch, Ottawa.

Farmers, shippers and drovers have now become more fully acquainted with grading standards. Grading demonstrations are still conducted at local shipping points from time to time as required and supplementary educational activities to hog grading, such as assistance to swine clubs, organization of swine-breeding centres, and assistance in the purchase and distribution of breeding stock for improvement purposes, are also carried on with the help of the hog graders throughout the various provinces.

Under the provisions of clause 11 of the revised regulations, the drover or shipper is now compelled to grade each farmer's hogs at the local shipping point and make settlement to the farmer on the basis of such grades. He may in lieu of the above, if he so desires, place a distinct and specific mark of approval on each farmer's hogs and the farmer will be paid on the basis of the official grade on such marked hogs which is awarded at their ultimate destination. In either case the drover or shipper must fill out a shipper's grading certificate showing each farmer's name, address, number of hogs of each farmer, and their grade or mark. This certificate has to be handed to the official grader at the stock-yards or abattoirs to which the hogs are shipped. The farmer is then advised by the office of the District Swine Grader at that point as to the actual grading on his hogs if they were marked, and if not, the official grade as well as the drover's or shipper's grade on the carlot of which his hogs were a part.

With an effective means thus provided for checking local grading, the wider application of this practice should appeal to farmers. It has the advantage of enabling the farmer to see the grading not only of his own hogs, but also that of his neighbour's hogs before they are shipped to market. Local grading, if conscientiously done, will undoubtedly act as an excellent educational factor. Where there is a dispute over certain hogs, these can readily be marked and the argument is then left to the official grader at the final market for settlement. Where the local grader refuses to undertake the responsibility for grading or shows inability to grade correctly, he will be required to mark all hogs he ships according to ownership and an official grading statement will be sent to each farmer.

It is to be expected that some localities will present special problems to be solved, but there is always a solution and the district that aims to produce a good type of hog should support the marketing machinery which operates to provide the producer of good hogs with the difference in price due him.

MARKING HOGS

Experience in the marking of hogs as carried on by shippers and drovers made it possible to study the various systems used with a view to making a selection of the best system for general use throughout the Dominion. A system has been outlined in Dominion Department of Agriculture Pamphlet No. 88 (new series). This pamphlet may be obtained free by writing the Publications Branch, Dominion Department of Agriculture, Ottawa. In brief, the system outlined therein is the application of different marks at different locations on the back of the hog by means of clipping the hair with scissors or with clippers. On short-haired hogs where such marks are not sufficient, it is advised to add a paint mark with roofing paint, which dries quickly.

It is not expected or recommended that all hogs should be marked. As already pointed out, local grading when efficiently done, eliminates the necessity for maintaining local identity, except in the case of doubtful hogs. Where local grading is not feasible, marking hogs has been demonstrated as being both feasible and practical.

PREVENTION OF HOG BRUISING

The hog is subjected to its first danger of bruising when being loaded out of the feeding pen at the farm previous to being taken to market. Very often the pigs have not been out of the fattening pen for months, and unless strict precaution is exercised in loading out of the pen difficulties will occur. Where the shipper loses his temper and the pigs are beaten and hammered the result is that they are heated up and often bruised before they leave the station. Bruises that occur before shipment are the most serious because sufficient time elapses before slaughter to allow such bruises to fester, thus damaging a portion of the surrounding tissue in addition to the bruised spot.



Badly bruised side—the result of rough handling.

With proper preparation the main difficulty in loading out the hogs at the farm is often overcome. The loading chute should be gone over and given the necessary repairs, after which it should be put into place. The wagon with stock rack may now be backed into position. Make sure that a good approach is made and that the sides are properly closed in. Pigs are suspicious of a steep, bare, slippery chute and, especially when not acquainted with it, are likely to refuse to move from the pen. Clubbing only adds to their stubbornness and when it is once aroused loading becomes a difficult task. On the other hand, pigs like to nose about in fresh bedding and a well-bedded chute that provides easy access to the wagon will often be sufficient inducement to arouse their curiosity and permit of their being loaded without trouble.

Unloading pigs from the wagon and reloading them into the stock car is the second place where considerable bruising often occurs. At some shipping points there is not a good unloading chute. Farmers should insist that railways provide proper unloading chutes. Poor unloading facilities result in rough handling of hogs. There is often carelessness on the part of farmers in backing up squarely for unloading, in which case pigs may drop into the unprotected opening, running danger of breaking a leg, or of serious bruising. When unloading hogs from a wagon or sleigh, they should not be prodded with sharp-pointed sticks.

Previous to loading a stock car, provide plenty of bedding. Be sure that the car is properly spotted and that the approach makes the car easily accessible for the pigs. Drive pigs up the approach to car without undue hurry or crowding and avoid the use of canes or heavy goad sticks.

Careful handling of hogs on the part of farmers and local shippers will prevent a very large proportion of bruises which are most wasteful to the packers and as a result an indirect loss to the farmer.

DISTRIBUTION OF HOG MARKETINGS

One of the main causes of fluctuation in hog values in Canada has been the excessive marketings at certain seasons of the year. The production of spring and fall litters only, has become almost a settled policy with many, resulting in excessive spring and fall marketings. In Western Canada, many farmers raise only spring litters, the practice being due to the newness of the country, cold winter weather, and lack of suitable buildings for winter feeding. The present tendency towards mixed farming with skim milk available on many farms, should make it possible to rear two profitable litters a year, especially when well constructed straw huts, which are cheap and within the reach of every western farmer, are built. Such straw huts provide a warm dry shelter which permits of the winter feeding of early well started litters with little additional cost over summer production. In Eastern Canada, the gradual extension of dairy farming, coupled with more favourable climatic conditions, has made it possible for farmers to farrow their pigs successfully in almost any month of the year, provided they have warm buildings for winter farrowing. The usual discrepancy between summer and winter prices for hogs, as compared with fall and spring prices, has had the effect of inducing many farmers to diversify their breeding operations so that sows farrow at periods other than during the spring and fall months. This is tending to distribute hog marketings very materially, but a great many more hog raisers could still breed their sows so that farrowing dates would permit of finishing the litters with a better chance of obtaining a higher average price.

MORE COMPLETE ORGANIZATION OF SWINE BREEDERS AND PRODUCERS NECESSARY

Perhaps one of the greatest needs in the swine industry of the Dominion at present is organization. There is need of organization locally, provincially, and finally on a Dominion basis. Canada is to-day expanding her hog population with a view to taking a more prominent place as an export bacon country. If this objective is to be reached the machinery of production must be so organized that the proper type of animal will be produced, that a continuous supply will be marketed, and lastly, but not least, that the producers will continue to obtain their fair share of the real value of the finished product. The indifference with which farmers in many districts have viewed hog grading and the lack of effort to avail themselves of the premium in many instances, have been due to lack of organized effort and proper appreciation of market requirements. The initiation of the hog grading movement has clearly demonstrated the advantage of organized effort, not only from the standpoint of the production of select bacon hogs in quantity but also from that of the effectiveness with which communities are able to establish sale on a graded basis without in any way adding to the cost of marketing or of the provision of additional marketing facilities.

During the past two years the demand for pure-bred stock of the bacon breeds has been good, and consequently in some cases not sufficient thought has been given to the selection of outstanding individuals within the breeds. Type in pure-breds must be definitely correlated with commercial standards, and a means must be found for establishing a true measure of breeding ability especially for boars. In the past the sale of hogs on a flat basis did not provide any definite means of estimating a boar's real breeding value, but from now on the percentage of select hogs marketed as the progeny of any boar will provide a reasonably accurate measure of his ability to breed the right type. The responsibility of the pure-bred breeder, therefore, will be to maintain as high an average of individuality as possible, in the stock which he offers for sale following this with a corre-

spondingly keener adherence to the process of weeding out as the general average of Canadian hogs improves from year to year. The old practice followed in many districts of disposing of boars after using them for one or two breeding seasons was, to say the least, wasteful and resulted in many of our best boars being sacrificed to the block just when they were at their best for breeding purposes.

Community organizations have already accomplished much for farmers by rendering a marketing service. However, their commercial effectiveness will be greatly increased if such associations will purchase outstanding boars for the use of members. The annual cost of maintaining stud boars can also be materially decreased and the use of improved sires made more effective if provision can be made for the exchange between communities of boars of proven merit.

The position of the swine industry in Canada was undoubtedly critical at the time when the hog grading policy was evolved. The seriousness of our position, so far as quality of hogs was concerned became clearly evident when the data for hog grading was first compiled. Much has already been accomplished and is being accomplished through breed improvement. Aside from breeding, the problem of feeding is one of major importance. Many are already beginning to realize that good breeding must be backed up by proper and intelligent feeding. Both are problems which readily lend themselves to community effort and, if linked up with a marketing service which provides for settlement on a graded basis, the maximum percentage of select bacon hogs would soon be reached in communities which were properly organized for collective production.

HOG GRADING REGULATIONS

UNDER THE LIVE STOCK AND LIVE STOCK PRODUCTS ACT

1. For the purpose of these regulations—

- (a) "Abattoir" shall mean an establishment where 3,000 or more hogs are slaughtered in any one year or where 1,000 or more hogs are slaughtered during a period of three consecutive months in any one year.
- (b) "Grader" shall mean the official swine grader or his assistants duly appointed under the authority of paragraph 4 of these regulations.
- (c) "Grading Certificate" shall mean the certificate supplied by the grader in paragraph 8 or the certificate of grading required in paragraph 11, sub-paragraph (c).
- (d) "Person" shall include a partnership, association, syndicate or corporation.
- (e) "Shipper" shall mean any person who on his own account or as agent for any other person ships hogs by any means of transportation, by land or water, to an abattoir or stockyard.
- (f) "Stockyard" shall mean a live stock market operating as a stockyard in accordance with the provisions of the Live Stock and Live Stock Products Act.

2. Hogs sold or offered for sale at stockyards or such other points as may be designated from time to time by the minister, and hogs arriving at abattoirs and hogs for export, except pure-bred hogs exported for the improvement of stock and hogs entered for exhibition at a state or national exposition, shall be graded as provided by these regulations.

3. All hogs falling within the provisions of paragraph 2 shall be graded as follows:—

Grade 1—Select Bacon: Hogs weighing 180 to 220 pounds W.O.C. at stockyards and abattoirs or hogs weighing 190 to 230 pounds fed and watered at

stockyards or at local shipping points and at such other points as may be designated from time to time; jowl and shoulder light and smooth; back from neck to tail evenly fleshed, side long, dropping straight from back, belly showing thickness of fleshing; flank well let down and firm; ham full; good general finish; no excess fat.

Grade 2—Bacon: Hogs weighing 170 to 220 pounds W.O.C. at stockyards and abattoirs or hogs weighing 180 to 230 pounds fed and watered at stockyards or at local shipping points and at such other points as may be designated from time to time; of the same general characteristics as Select Bacon hogs, but lacking somewhat in length and/or in general quality as compared with the Select Bacon grade; good general finish; no excess fat.

Grade 3—Butchers: Hogs weighing 150 to 230 pounds W.O.C. at stockyards and abattoirs or hogs weighing 160 to 240 pounds fed and watered at stockyards or at local shipping points and at such other points as may be designated from time to time; not conforming to the standards for the bacon grades, smooth fleshing and good finish.

Grade 4—Heavies: Hogs weighing over 230 pounds and up to 260 pounds W.O.C. at stockyards and abattoirs or hogs weighing over 240 pounds and up to 270 pounds fed and watered at stockyards or at local shipping points and at such other points as may be designated from time to time; hogs of smooth conformation and finish.

Grade 5—Extra Heavies: Hogs weighing over 260 pounds W.O.C. at stockyards and abattoirs or hogs weighing over 270 pounds fed and watered at stockyards or at local shipping points and at such other points as may be designated from time to time; of smooth conformation and finish.

Grade 6—Lights and Feeders: Hogs of smooth conformation under 150 pounds W.O.C. at stockyards and abattoirs or hogs weighing under 160 pounds fed and watered at stockyards or at local shipping points and at such other points as may be designated from time to time, and unfinished hogs of any weight.

Grade 7—Roughs: Hogs of rough conformation. Any weight.

Grade 8—Sows: All females that have raised one or more litters.

Sub-grade (a). Those of smooth finish and trim underline weighing up to 350 pounds W.O.C. at stockyards and abattoirs or sows weighing up to 360 pounds fed and watered at stockyards and abattoirs and at local shipping points and at such other points as may be designated from time to time.

Sub-grade (b). All other sows.

Grade 9—Stags: Boars which have been castrated and are well healed.

4. At stockyards, abattoirs and such other points as may be designated by the minister, the minister shall assign a swine grader, together with such assistants as he may deem necessary to grade hogs in accordance with the regulations under this Act and to inspect the grading of hogs in accordance with the grades established by these regulations.

5. Any Provincial Swine Breeders' or Provincial Producers' Association may make formal application for a grading centre to the Live Stock Commissioner when it is evident that the stockyards in the province operating under the Live Stock and Live Stock Products Act do not adequately serve the territory in question or when there is no stockyard operating under the Live Stock and Live Stock Products Act in such province. If the application is approved a grader will be delegated for service as soon as possible after the date of approval and when the necessary equipment for grading is provided at such grading centre.

6. Stockyards, abattoirs and other grading centres shall provide adequate equipment for grading. Such equipment shall consist of suitable sorting pens, scales and such other equipment as shall insure proper and efficient grading in accordance with plans approved by the Live Stock Commissioner.

7. The grading of a carlot, part carlot, truckload or pen of hogs shall not be certified to by the grader until—

- (a) Hogs have been graded and penned separately according to the official grades herein designated;
- (b) The hogs in each separate grade have been weighed, the grader to check weighing in cases where no official weighmaster is operating;
- (c) A scale ticket tabulating the weights of hogs so graded has been made out and signed by the weighmaster. Separate scale tickets shall be required in the case of imported hogs and these tickets shall state the country of origin.

8. A certificate of grading shall be made out and signed by the grader and shall be in the form prescribed in Form No. 1 attached hereto.

9. Graders shall, when grading hogs, be provided with a sufficient number of efficient helpers who shall be responsible for the movement of hogs during grading. Helpers shall be supplied by—

- (a) The consignee when hogs are being graded at stockyards;
- (b) The abattoir when hogs are being graded at abattoirs;
- (c) The shipper when hogs are being graded at other grading centres.

10. All hogs falling within the provisions of paragraph 2 shall not be released by a stockyard or be moved from the holding pens of an abattoir or be moved by the owner or shipper from such other grading centres as may be established from time to time until the certificate of grading prescribed under paragraph 8 has been issued by the grader. Such certificate of grading may be withheld by the grader for failure to comply with any regulation of these regulations and until compliance therewith.

11. (a) All hogs falling within the provisions of paragraph 2 shall be graded by the shipper before shipment in accordance with the provisions of paragraph 3 and settlement shall be made to the farmer on the basis of such grades.

(b) Where a shipper desires to do so, he may in lieu of the grading required by the sub-paragraph last preceding place a distinct and specific mark of identity, having the approval of the minister on each hog of each farmer's lot of hogs in each and every carlot, truckload, or other shipment, and in such case settlement shall be made to the farmer on the basis of the grades awarded to the hogs by the grader. In any case, the minister may require a shipper to place such mark of identity on any hogs shipped by such shipper.

(c) The shipper shall make out and sign a certificate of grading on Form 2 hereunder, showing each farmer's name, address, number of hogs of each farmer and their grading or mark of identity, and shall cause the said certificate to be delivered to the grader at the stockyard or abattoir to which the hogs are shipped within twenty-four hours after arrival of the hogs at such stockyard or abattoir.

12. Any shipment containing hogs from more than one owner consigned to or offered for sale at a stockyard shall be graded as provided herein and in addition the grading inspector shall list on the grading certificate the mark,

weight and grade of each individual hog comprising such shipment and shall furnish a copy of such certificate to the owners or their agent provided that—

- (a) A plan for the individual weighing and grading of hogs has been approved for use in stockyards by the minister;
- (b) Stockyards have been properly equipped for the individual weighing and grading of hogs in accordance with such plan.
- (c) Each hog in such shipment is marked with a mark of identification approved by the minister.

13. Hogs for export from Canada in carlots, part carlots or truckloads shall be graded as required in paragraph 11, sub-paragraph (a) and shall be accompanied by a grading certificate as required in paragraph 11, sub-paragraph (c). The shipper of hogs for export shall prepare a grading certificate, in triplicate, in the manner hereinbefore prescribed to be attached to the export entry, Form B 13, which grading certificate on arrival at the frontier port of exit, is to be taken up by the customs officials, one copy to remain with the B 13 on file at the port, one copy to be forwarded to the department with departmental copy of B 13, and the third copy to be forwarded by mail to the Live Stock Branch, Department of Agriculture, Ottawa.

In the case of hogs for export that have been graded officially at stockyards or abattoirs, the grader's certificate, in triplicate, as defined in paragraph 8, shall be attached by the shipper to the export entry Form B 13, which grading certificate on arrival at the frontier port of exit is to be taken up by the Customs officials, one copy to remain with the B 13 on file at the port, one copy to be forwarded to the department with departmental copy of Form B 13 and the third copy to be forwarded by mail to the Dominion Live Stock Branch, Department of Agriculture, Ottawa.

Each and every carlot, part carlot or truckload of hogs en route for export shall be subject to inspection by a hog grading inspector who, if not satisfied that the grading is correct, may so advise the Customs officer when such hogs will be withheld from export until properly graded and a satisfactory grading certificate is provided.

14. Officers of the Department of National Revenue are authorized to decline to permit live hogs for commercial purposes for export from Canada in carlots, part carlots or truckloads to be exported when arriving at a frontier port of exit accompanied by a grading certificate not properly completed or unaccompanied by any grading certificate as required in section 13 hereof, and that in respect of shipments of live hogs for commercial purposes, the exportation of which is not permitted, notification shall be furnished by the officer of Customs to the nearest inspector of the Department of Agriculture, and such shipments shall not be permitted to be exported until so authorized in writing by the appropriate inspector.

15. These regulations shall become effective immediately upon publication in the *Canada Gazette* with the exception of paragraph 11, which shall become effective March 1, 1929.

DOMINION LIVE STOCK BRANCH

HOG GRADING AND RELEASE CERTIFICATE

Place.....

Shipping Point.....

Shipper..... Address.....

Consignee..... Sold to.....

Grade	Mark	No.	Weight	Grade	Mark	No.	Weight
Select				Heavies			
Bacon				Extra Heavies			
Bacon				Lights and Feeders			
Butchers				Sows No. 1			
				Sows No. 2			
				Roughs			
				Stags			

Hogs in car No..... containing..... head
are hereby certified as having been correctly graded and release is authorized.

Placed in yard..... Total weight.....

Pen.....

Grading Inspector.....

